

would lead us to suppose that the fibres of the motor nerves are continuous with those of the cerebellum; but hitherto no observations have been made which prove the existence of this connexion; and it is the object of the author, in this paper, to establish, by a more careful examination of the anatomical structure of this part of the nervous system, such continuity of fibres between the anterior columns of the spinal cord and the cerebellum. The corpora pyramidalia have been hitherto considered as formed by the entire mass of the anterior, or motor columns of the spinal cord; but the author shows that not more than one half of the anterior columns enters into the composition of these bodies: and that another portion, which he terms the *antero-lateral* column, when traced on each side in its progress upwards, is found to cross the cord below the corpora olivaria, forming, after mutual decussation, the surface of the corpora restiformia; and ultimately being continuous with the cerebellum. These fibres are particularly distinct in the medulla oblongata of the sheep and of the horse. The author conceives that the office of the antero-lateral columns is to minister to the involuntary, as well as to the voluntary movements: that the facial nerve arises from both the voluntary and involuntary tracts; and that the pneumogastric nerve arises both from the involuntary and the sensory tracts.—*Ibid.*

3. *Unusual course of the internal pudic artery.*—Dr. MORTON communicated to the University College Medical Society, at their meeting of the 17th of March last, a drawing with the details of a dissection of a male subject, in which the internal pudic artery, instead of running its usual course, did not pass out of the pelvis, but ran almost directly forwards along the side of the bladder and prostate. The body was that of a man about 40 years of age. On the left side the internal pudic artery, springing from the internal iliac, opposite the great sacro-sciatic notch, passed forwards and inwards to reach the under surface of the pubic symphysis, at which point the artery emerged from the pelvis, and ran along the upper surface of the penis, as the arteria dorsalis penis. In the first part of this course the vessel lay close to the side of the bladder, within the levator ani muscle, a little above the vesicular seminæ; and as it passed along the lateral surface of the prostate, to which it was firmly bound down by the fascia covering that body, the artery lay directly across the line of incision made in the lateral operation of lithotomy. The vessel ascended, in an oblique direction, along the gland from its lower and posterior angle to the symphysis pubis. In this part of its course, the artery gave off no branches. As it was leaving the pelvis, a small branch passed backwards upon the upper surface to the bladder, to which it was distributed, and between the pubic symphysis two branches passed off to the corpus cavernosum and to the bulb of the urethra; the latter gave off the transverse artery of the perineum, and also the superficiales perinei. The internal pudic on the right side ran the usual course, along the inner surface of the ischium. From this arrangement of the vessel, it was very certain that had the lateral operation of lithotomy been performed upon this individual during his life the artery must have been cut across, and a very alarming, if not fatal, hemorrhage ensued, as happened to the late Mr. S. Shaw during an operation in the Middlesex Hospital.—*British Ann. Med.*, Feb. 24, 1837.

4. *Observations on the best Mode of Demonstrating the Internal Structure of the Heart, and on the Septum of the Auricles in Man.* By Professor RETZIUS.—With a view to obtain a more instructive representation of the heart in its natural state than has hitherto been done, the author has for some time pursued the following method, which exhibits the cavities and the situation of the valves in a distinct and correct manner. The heart having been removed from the subject, in connexion with the liver, the venæ cavæ, the aorta, and the lungs, and having been properly freed from blood by injections of water, is steeped in a mixture of oil of turpentine and spirits of wine. The cavities are then amply injected through the pulmonary and superior venæ cavæ, the aorta, and the pulmonary artery, with a mixture of white wax and oil of turpentine. As soon as the mass is firm, the heart, together with the great vessels, is separated from the rest, the extremities of the vessels are tied, and the preparation, having been cleaned with the scalpel, is left to dry. When thoroughly dried, it is macerated in spirits of turpentine, till the wax is softened or entirely dissolved. In this manner the heart and arte-

ries are emptied after the walls have dried over the wax forms, which were true casts of the natural cavities, their septa and valves, &c. The parietes themselves, being impregnated with turpentine, lose little of their natural thickness. The parietes may now be either cut open or rendered transparent with the aid of resins, so that the internal structure can be examined. Another method of preparation, somewhat less advantageous, is to open the auricles, ventricles, and blood-vessels, then fill them up with cotton, or to leave them unopened, but to fill them with proof spirit, afterwards suspending them in the same medium. The water contained in the heart's tissue is attracted by the spirit; the walls thus become stiffened, and retain their form even after the alcohol has been removed. Preparations of this kind are to be met with in Hunter's museum.

On examining a heart thus prepared, the first observation we make is that the left auricle forms an oblong pouch, having almost a horizontal position, its right extremity encroaching upon the domain of the right auricle, the situation of which is nearly vertical. At the point where the two pouches meet, the septum of the auricles develops itself with its inferior portion almost lying across the mouth of the vena cava. This is the exact spot which in the foetus is occupied by the foramen ovale and its border, and the partition itself consists of the thickened valve, by the adhesion of which with the neighbouring parts the foramen ovale was closed up. The upper part of the septum forms the imperfect septum auricularum in the foetus. If the auricle be opened, the left being filled up, we discover a protuberance presented by the upper part of the border of the obliterated valve. This, together with the convexity formed above it by the septum, probably constitutes the tubercle mentioned by Lower.

The arrangement of the septum in its different parts has the greatest influence over the functions of the heart under the various circumstances of life. If the body be at rest, the blood flows gently from the lower parts into the right auricle, but if it be pumped up by hard breathing, as in those affected with dyspnoea, the influx becomes far more hurried. It is still more accelerated by an uninterrupted exercise of the muscles of the lower extremities, as the muscles then press on the parietes of the large veins, and thus force the blood onwards towards the auricle, whilst its retrogression is prevented by the valves. The curvature of the septum, the tendency of the circular muscles around the foramen ovale, and the curvatures at the entrance of the venæ cavae, prevent the blood from penetrating from the inferior into the superior venæ cavae, or vice versa. If it were otherwise, apoplexy would easily occur in the former instance, and injurious effects on the liver in the second.—*B. and F. Med. Rev.* April, 1837, from *Kgl. Wetensk. Acad. Handlinger*, 1835.

5. *Apparent Hermaphroditism. Sexual connexion through the canal of the urethra.*—At a recent meeting of the Royal Academy of Medicine of France, M. BALLY presented, for the inspection of the members, a young German, affected with a curious organization of the sexual parts, causing the individual to have been regarded, for several years, as a female, though in reality a male. The scrotum of this young person exhibits a deep furrow along the median line, which gives the part a good deal of the appearance of the labia majora in the female, the substance of each labium, or rather demi-scrotum, contains a hard, oval body, well developed (the testicle). At the superior commissure of the furrow we observe an elongated body, about an inch and a half in length, resembling a large clitoris, and capable of erection—this is a portion of the root of the penis. Beneath the rudimentary penis we find an opening leading into a canal that easily received the finger; this canal is prolonged upwards towards the bladder, and offers some resemblance to a vagina; when a catheter is introduced through the opening, it penetrates into the bladder. The person, also, affirms that the urine naturally flows through the same orifice. The canal, then, is nothing else than an urethra, enormously distended during the act of copulation, to which this individual has voluntarily submitted himself for several years, on the supposition that he was a female. In fact, the general appearance is completely feminine. He was baptized and brought up as a female; presents no trace of beard; his form is delicate and agreeable; his voice soft, &c.

The individual acknowledges having accorded his favours to various persons of the male sex, whose embraces he sought with avidity. The effect of the first